



# **COMMONWEALTH of VIRGINIA**

## **DEPARTMENT OF ENVIRONMENTAL QUALITY**

VALLEY REGIONAL OFFICE

L. Preston Bryant, Jr.  
Secretary of Natural Resources

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David K. Paylor  
Director

Amy Thatcher Owens  
Regional Director

### **STATE AIR POLLUTION CONTROL BOARD ENFORCEMENT ACTION - ORDER BY CONSENT ISSUED TO O-N Minerals (Chemstone) Company Registration Number: 80252**

#### **SECTION A: Purpose**

This is a Consent Order issued under the authority of Va. Code §§ 10.1-1187, -1184, -1307(D), -1309, and -1316(C), between the State Air Pollution Control Board and O-N Minerals (Chemstone) Company, for the purpose of resolving certain violations of the Virginia Air Pollution Control Law and the Regulations for the Control and Abatement of Air Pollution.

#### **SECTION B: Definitions**

Unless the context clearly indicates otherwise, the following words and terms have the meaning assigned to them below:

1. "Va. Code" means the Code of Virginia (1950), as amended.
2. "Board" means the State Air Pollution Control Board, a permanent citizens' board of the Commonwealth of Virginia as described in Code §§ 10.1-1184 and 10.1-1301.
3. "Department" or "DEQ" means the Department of Environmental Quality, an agency of the Commonwealth of Virginia as described in Va. Code § 10.1-1183.
4. "Director" means the Director of the Department of Environmental Quality, as described in Va. Code § 10.1-1185.
5. "Facility" means O-N Minerals' facility located at 1696 Oranda Road, Strasburg, Shenandoah County, Virginia, which crushes and processes limestone.

6. “O-N Minerals” or “Owner” means O-N Minerals (Chemstone) Company, a corporation authorized to do business in Virginia and its affiliates, partners, subsidiaries, and parents. O-N Minerals is a “person” within the meaning of Va. Code § 10.1-1300.
7. “Order” means this document, also known as a “Consent Order” or “Order by Consent,” a type of Special Order under the Virginia Air Pollution Control Law.
8. “Regulation” or “Regulations for the Control and Abatement of Air Pollution” mean 9 VAC 5 chapters 10 through 80.
9. “Title V Permit” means a Title V Operating permit to operate, which was issued under the Virginia Air Pollution Control Law and the Regulations to O-N Minerals on July 30, 2002.
10. “Virginia Air Pollution Control Law” means Chapter 13 (§ 10.1-1300 *et seq.*) of Title 10.1 of the Va. Code.
11. “VRO” means the Valley Regional Office of DEQ, located in Harrisonburg, Virginia.
12. “1981 Permit” means the minor New Source Review permit to add coal-burning capability to the rotary kiln, which was issued under the Virginia Air Pollution Control Law and the Regulations to O-N Minerals on September 10, 1981.
13. “2000 Permit” means the amended minor New Source Review permit to modify and operate a rotary lime kiln, which was issued under the Virginia Air Pollution Control Law and the Regulations to O-N Minerals on July 31, 2000.
14. “Notice of Violation” or “NOV” means a type of Notice of Alleged Violation under Va. Code § 10.1-1309.
15. “VAC” means the Virginia Administrative Code.

#### **SECTION C: Findings of Facts and Conclusions of Law**

1. O-N Minerals is the owner and operator of the Facility. This Facility was previously the subject of the 1981 Permit which was superseded by the 2000 Permit. It is currently subject to its Title V Permit.
2. The Environmental Protection Agency (“EPA”) promulgated regulation, 40 CFR § 52.21, for the Prevention of Significant Deterioration (PSD), of air quality in areas that attain national ambient air quality standards (NAAQS). Until April 21, 1998, these Federal requirements were incorporated by reference and made a part of Virginia’s State Implementation Plan (SIP) and were applicable to stationary sources located in these areas. Since April 21, 1998, equivalent PSD requirements applicable to stationary sources located in these same areas can be found in Virginia’s Administrative Code at 9 VAC 5-80-1605 *et seq.*

3. Pursuant to 40 CFR § 81.347, Shenandoah County is classified as meeting NAAQS for oxides of Nitrogen ( $\text{NO}_x$ ), Sulfur Dioxide ( $\text{SO}_2$ ) and particulate matter (PM). As the Facility is located in Shenandoah County, PSD rules apply to any major modification or construction with significant net emissions increases of regulated pollutants.
4. On June 10, 1981, the Owner submitted a permit application for the Facility to modify the rotary kiln to add coal burning capability. The Board incorporated the modification into the 1981 Permit. The net emissions increases of regulated pollutants resulting from the modification to the rotary kiln were based on a maximum lime production rate of 23 tons per hour and 47 weeks of operation per year, equating to 181,608 tons of lime per year. Subsequently, the Owner reported an increased maximum rated capacity of the rotary kiln from 23 to 25 tons per hour and reported kiln operation in excess of 47 weeks per year.
5. In 2000, the Owner submitted information claiming that there was no relationship between the fuel sulfur input and  $\text{SO}_2$  emissions because “the stoichiometric ratios between  $\text{CaO}$  [Calcium Oxide or lime] in the preheater and kiln and the  $\text{SO}_2$  being adsorbed was over 50 times the levels used in the design of conventional lime-based scrubbers.” At the same time, the Owner requested an increase in the permitted sulfur content in the coal used in the rotary kiln from 1% to 1.5%.
6. In April 2000, stack testing was performed using coal containing 1% and 1.5% sulfur. The test results indicated  $\text{SO}_2$  emission rates ranging from 0.05 to 1.62 pounds per hour with an estimated maximum emission rate of 7.1 tons per year. The highest measured  $\text{SO}_2$  emission rate was actually achieved while burning the lower sulfur content coal. Based on these results, it appeared that the lime kiln and preheater were effectively controlling greater than 99% of the  $\text{SO}_2$  emissions from burning coal and that the increase in the sulfur content of the fuel had no effect on air emissions.
7. Based on these test results, DEQ issued the 2000 Permit allowing an increase in the coal sulfur content to 1.5%, with a corresponding fuel sulfur input increase to 592.2 tons per year. No other changes were made to the permit, and the project was not evaluated as a modification because the stack testing demonstrated that there was no increase in  $\text{SO}_2$  emissions from changing the fuel sulfur content.
8. From calendar years 2000 through 2007, the Owner reported  $\text{SO}_2$  emissions and paid  $\text{SO}_2$  emissions fees based on the  $\text{SO}_2$  emission rate established during the 2000 stack test. The Regulation, at 9 VAC 5-80-330(A) states: “The owner of any source subject to this article shall pay an annual permit program fee.” and at 9 VAC 5-80-340(C) states: “The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the department.”

9. Between January and October 2001, the Owner performed a major modification, as defined in 9 VAC 5-80-1615(C), by lengthening the rotary kiln in order to increase production without submitting a permit application or first obtaining a permit.
  - a. The Regulation, at 9 VAC 5-80-1625(A), states: “No owner or other person shall begin actual construction of any new major stationary source or major modification without first obtaining from the board a permit to construct and operate such source. The permit will state that the major stationary source or major modification shall meet all the applicable requirements of this article.”
  - b. The Regulation, at 9 VAC 5-80-1655(A), states: “A single application is required identifying at a minimum each emissions unit subject to the provisions of this article. The application shall be submitted according to procedures acceptable to the board. However, where several emissions units are included in one project, a single application covering all units in the project may be submitted. A separate application is required for each location.”
10. Between January and May 2003, the Owner performed another major modification, as defined in 9 VAC 5-80-1615(C), by modifying the feed end of the rotary kiln without submitting a permit application or first obtaining a permit. (See citations for 9 VAC 5-80-1625(A) and 9 VAC 5-80-1655(A) in paragraph 9.)
11. The Owner did not demonstrate that it applied best available control technology (BACT) to its PM, NO<sub>x</sub> or SO<sub>2</sub> emissions following the 2001 or 2003 major modifications of the rotary kiln. The Regulation, at 9 VAC 5-80-1705(C) states: “A major modification shall apply best available control technology for each regulated NSR pollutant for which it would result in a significant net emissions increase at the source. This requirement applies to each proposed emissions unit at which a net emissions increase in the pollutant would occur as a result of a physical change or change in the method of operation in the unit.”
12. The Owner did not demonstrate that allowable emission increases from either modification, in conjunction with all other applicable emissions increases or reductions would not cause or contribute to air pollution in violation of applicable ambient air quality standard in its air quality control region. The Regulation, at 9 VAC 5-80-1715(A) states: “The owner of the proposed source or modification shall demonstrate that allowable emission increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reductions (including secondary emissions), would not cause or contribute to air pollution in violation of: 1. Any ambient air quality standard in any air quality control region; or 2. Any applicable maximum allowable increase over the baseline concentration in any area.”
13. On March 10, 2008, DEQ received copies of the Owners’ emission test report, performed on October 30, 2007, for NO<sub>x</sub> and SO<sub>2</sub> emissions from the rotary kiln. The NO<sub>x</sub> and SO<sub>2</sub> testing was conducted in support of the Owners’ Best Available Retrofit Technology (BART) permit application. The test results indicated that NO<sub>x</sub> and SO<sub>2</sub> emissions from the rotary kiln were greater than previously estimated.

14. Data reported by the Facility for the rotary kiln from 1986 to 2007 appears to show potential emission limit exceedences for the following pollutants/years:
  - a. PM (1986, 1987, 1988, 1991, 1992 and 1994 through 2007): The 1981 Permit established a PM limit for the rotary kiln of 0.7 pounds per ton of limestone feed. Using a maximum lime production rate of 181,608 tons per year, future actual PM emissions were calculated to be 154.36 tons per year. Past actual PM emissions from 1976 to 1980 were calculated to be 130.39 tons per year, resulting in a net emissions increase of 23.97 tons per year. However, during the review of the 1981 Permit application, the controlled PM emissions increase from the coal handling equipment (4.03 tons per year) was not included in the net emissions increase calculation. When these emissions are included, the total net emissions increase resulting from the modification was actually 28.0 tons per year, which is greater than the PSD significance level of 25 tons per year for PM.
  - b. NO<sub>x</sub> (1986, 1987, 1988, 1991, 1992, 1994, 1995, 1996, and 1998 through 2007): The 1981 Permit did not establish a NO<sub>x</sub> limit, as the supporting calculations indicated no change in the NO<sub>x</sub> emission rate of 3 pounds per ton of lime produced. However, based on a maximum lime production rate of 181,608 tons per year, future actual NO<sub>x</sub> emissions would have been 272.4 tons per year. Past actual NO<sub>x</sub> emissions from 1976 to 1980 were determined to be 230.1 tons per year, resulting in a net emissions increase of 42.3 tons per year. This net emissions increase is greater than the PSD significance level of 40 tons per year for NO<sub>x</sub>.
  - c. SO<sub>2</sub> (2007): Based on a permitted maximum lime production rate of 181,608 tons per year, future actual SO<sub>2</sub> emissions would have been 39.48 tons per year. The October 30, 2007, emission test reported that SO<sub>2</sub> emissions averaged 66.1 pounds per hour, corresponding to a potential to emit of 289.5 tons per year of SO<sub>2</sub>. This value indicates a net emission increase is greater than the PSD significance level of 40 tons per year for SO<sub>2</sub>.
15. Based on the emission calculations in paragraph 14, it appears that the Facility was subject to PSD rules at the time of the 1981 permit application and did not submit a PSD permit application. (9 VAC 5-80-1625 A)
16. O-N Minerals and VRO staff met on April 16, 2008 to discuss aspects of the SO<sub>2</sub> test results. O-N Minerals representatives indicated that the emission test report results were representative of SO<sub>2</sub> emissions from the rotary kiln and expressed their intent to submit the PSD permit application.
17. On June 3, 2008, DEQ issued a NOV to the Owner for the apparent emissions exceedences and regulatory violations as noted in paragraphs 5 through 15. On July 30, 2008, EPA issued a NOV to the Owner for other and similar violations, the most notable of which are a) performing a major modification without a permit and b) exceeding the hourly emission rate for SO<sub>2</sub> which was the basis for the 1981 permit approval. Both enforcement actions, while pursued separately and concurrently have been performed in a complimentary fashion so as to capture all the applicable violations of the Regulation but not to duplicate efforts, penalties, or corrective actions.

18. Based on the documentation submitted on March 10, 2008, the Board concludes that O-N Minerals has violated 9 VAC 5-80-330(A), 9 VAC 5-80-340(C), 9 VAC 5-80-1625(A), 9 VAC 5-80-1655(A), 9 VAC 5-80-1705(C), 9 VAC 5-80-1715(A), as described in paragraphs C(5) through C(15), above.
19. In order for O-N Minerals to return to compliance, DEQ staff and representatives of O-N Minerals have agreed to a Schedule of Compliance, which is incorporated as Appendix A of this Order.

#### **SECTION D: Agreement and Order**

Accordingly, by virtue of the authority granted it in Va. Code §§ 10.1-1309 and -1316, the Board orders O-N Minerals, and O-N Minerals agrees to:

1. Perform the actions described in Appendix A of this Order; and
2. Pay a total civil charge in settlement of the violations cited in this Order of \$158,980.00, in two separate installments according to the following schedule and amounts:
  - Pay \$58,980.00 within 30 days of the effective date of the Order, and
  - Pay \$100,000 by January 31, 2010.

Payment shall be made by check, certified check, money order or cashier's check payable to the "Treasurer of Virginia," and delivered to:

Receipts Control  
Department of Environmental Quality  
PO Box 1104  
Richmond, Virginia 23218

O-N Minerals shall include its Federal Identification Number (FEIN) with the civil charge payment and shall indicate that the payment is being made in accordance with the requirements of Order for deposit into the Virginia Environmental Emergency Response Fund (VEERF).

#### **SECTION E: Administrative Provisions**

1. The Board may modify, rewrite, or amend the Order with the consent of O-N Minerals, for good cause shown by O-N Minerals, or on its own motion pursuant to the Administrative Process Act, Va. Code § 2.2-4000 *et seq.*, after notice to and opportunity to be heard.
2. This Order addresses and resolves only those violations specifically identified in Section C of this Order. This Order shall not preclude the Board or the Director from taking any action authorized by law, including but not limited to: (1) taking any action authorized by law regarding any additional, subsequent, or subsequently discovered violations; (2)

seeking subsequent remediation of the facility; or (3) taking subsequent action to enforce this Order.

3. For purposes of this Order and subsequent actions with respect to this Order only, O-N Minerals admits to the jurisdictional allegations, and agrees not to contest, but neither admits nor denies, the findings of fact and conclusions of law in this Order.
4. O-N Minerals consents to venue in the Circuit Court of the City of Richmond for any civil action taken to enforce the terms of this Order.
5. O-N Minerals declares it has received fair and due process under the Administrative Process Act, and the Virginia Air Pollution Control Law and it waives the right to any hearing or other administrative proceeding authorized or required by law or regulation, and to any judicial review of any issue of fact or law contained herein. Nothing herein shall be construed as a waiver of the right to any administrative proceeding for, or to judicial review of, any action taken by the Board to modify, rewrite, amend, or enforce this Order.
6. Failure by O-N Minerals to comply with any of the terms of this Order shall constitute a violation of an order of the Board. Nothing herein shall waive the initiation of appropriate enforcement actions or the issuance of additional orders as appropriate by the Board or the Director as a result of such violations. Nothing herein shall affect appropriate enforcement actions by any other federal, state, or local regulatory authority.
7. If any provision of this Order is found to be unenforceable for any reason, the remainder of the Order shall remain in full force and effect.
8. O-N Minerals shall be responsible for failure to comply with any of the terms and conditions of this Order unless compliance is made impossible by earthquake, flood, other acts of God, war, strike, or such other occurrence. O-N Minerals shall show that such circumstances were beyond its control and not due to a lack of good faith or diligence on its part. O-N Minerals shall notify the DEQ Regional Director in verbally within 24 hours and in writing within three business days when circumstances are anticipated to occur, are occurring, or have occurred that may delay compliance or cause noncompliance with any requirement of the Order. Such notice shall set forth:
  - a. the reasons for the delay or noncompliance;
  - b. the projected duration of any such delay or noncompliance;
  - c. the measures taken and to be taken to prevent or minimize such delay or noncompliance; and
  - d. the timetable by which such measures will be implemented and the date full compliance will be achieved.

Failure to so notify the Regional Director within 24 hours and in writing within three business days, of learning of any condition above, which O-N Minerals intends to assert

will result in the impossibility of compliance, shall constitute a waiver of any claim to inability to comply with a requirement of this Order.

9. This Order is binding on the parties hereto, their successors in interest, designees and assigns, jointly and severally.
10. This Order shall become effective upon execution by both the Director or his designee and O-N Minerals. Nevertheless, O-N Minerals agrees to be bound by any compliance date which precedes the effective date of this Order.
11. This Order shall continue in effect until:
  - a) O-N Minerals petitions the Director or his designee to terminate the Order after it has completed all of the requirements of the Order and the Director or his designee approves the termination of the Order; or
  - b) the Director or Board terminates the Order in his or its sole discretion upon 30 days' written notice to O-N Minerals.

Termination of this Order, or any obligation imposed in this Order, shall not operate to relieve O-N Minerals, from its obligation to comply with any statute, regulation, permit condition, other order, certificate, certification, standard, or requirement otherwise applicable.

12. Any plans, reports, schedules or specifications attached hereto or submitted by O-N Minerals and approved by the Department pursuant to this Order are incorporated into this Order. Any non-compliance with such approved documents shall be considered a violation of this Order.
13. The undersigned representative of O-N Minerals certifies that he or she is a responsible official authorized to enter into the terms and conditions of this Order and to execute and legally bind O-N Minerals to this document. Any documents to be submitted pursuant to this Order shall also be submitted by a responsible official of O-N Minerals.
14. This Order constitutes the entire agreement and understanding of the parties concerning settlement of the violations identified in Section C of this Order, and there are no representations, warranties, covenants, terms or conditions agreed upon between the parties other than those expressed in this Order.

15. By its signature below, O-N Minerals voluntarily agrees to the issuance of this Order.

And it is so ORDERED this 26<sup>th</sup> day of October, 2009.

Amy Thatcher Owens  
Amy Thatcher Owens, Regional Director  
Valley Regional Office  
Department of Environmental Quality

O-N Minerals voluntarily agrees to the issuance of this Order.

Date: October 19, 2009 By: K. J. Whyte  
Kevin J. Whyte VP/General Counsel  
O-N Minerals (Chemstone) Company

Commonwealth of Pennsylvania

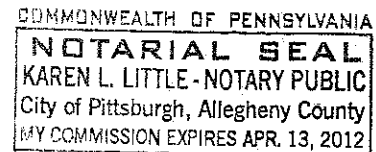
City/County of Allegheny

The foregoing document was signed and acknowledged before me this 19<sup>th</sup> day of  
October, 2009, by Kevin J. Whyte, who is Vice President/General Counsel  
of O-N Minerals, on behalf of the corporation.

Karen L. Little  
Notary Public  
1206384  
Registration No.

My commission expires: April 13, 2012 <sup>KLL</sup>

Notary seal:



## Appendix A

1. O-N Minerals shall perform the following actions:

- a) Until DEQ issues an NSR/PSD permit for modifications made to the rotary kiln, or until DEQ makes a determination that an NSR/PSD permit is not required, ensure that the annual lime production rate from the rotary kiln does not exceed 204,500 tons per year. Compliance with the annual lime production rate shall be calculated monthly as a 12-month rolling average.
- b) Within 90 days of the effective date of this Order, submit for DEQ review and approval, a stack test protocol for the rotary kiln to determine compliance with the standard for particulate matter contained in 40 CFR 60.342.
- c) Within 180 days of the effective date of this Order, conduct particulate matter testing on the rotary kiln in accordance with the DEQ approved protocol and 40 CFR 60.344.
- d) Within 90 days of the effective date of this Order, submit a revised Title V application (Form 8-05) for renewal of the Strasburg's facility's Title V operating permit. The revised applications shall include as new applicable requirements, the terms and conditions of EPA's and DEQ's settlement agreements resolving the June and July, 2008 NOV's, respectively. The revised application shall also include a new compliance certification.
- e) By September 10, 2010 or 180 days of the effective date of the BART permit, whichever occurs sooner, emissions from the operation of the rotary kiln shall not exceed the limits specified below:

Particulate Matter (PM)	0.12 lbs/tsf	6.0 lbs/hr
PM <sub>10</sub>	0.12 lbs/tsf	6.0 lbs/hr
Nitrogen Oxides (as NO <sub>2</sub> )	1.74 lbs/tsf	87.0 lbs/hr

*tsf= tons stone feed*

Compliance with the lb/tsf limits shall be based on the most recent DEQ-approved stack test. Compliance with the lb/hr limits shall be calculated monthly (as a monthly average) based on the lbs/tsf determined in the most recent DEQ-approved stack test, the monthly limestone feed input, and kiln operating hours for the month.

- f) Commencing with the effective date of this Order, submit to DEQ, quarterly reports documenting progress in achieving compliance with the terms and conditions of EPA's and DEQ's settlement agreements. The reports shall be submitted by the 15<sup>th</sup> day following the end of each calendar quarter and include progress made on the installation of the CEMS for monitoring SO<sub>2</sub> required by the EPA enforcement action referenced in paragraph 2. Submission of the reports shall conclude upon successful certification of the CEMS.
2. O-N Minerals shall perform all corrective actions required by the EPA Administrative Compliance Order signed by O-N Minerals on October 19, 2009, which is incorporated herein by reference.

3. **Certification of Documents and Reports**

In accordance with 9 VAC 5-20-230(A), in all documents or reports, including, without limitation, the SEP Completion Report, submitted to DEQ pursuant to this Consent Order, O-N Minerals, shall by a responsible official, sign and certify under penalty of law that the information contained in such document or report is true, accurate, and not misleading by signing the following statement:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering and evaluating the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

4. **DEQ Contact**

Unless otherwise specified in this Order, O-N Minerals shall submit all requirements of Appendix A of this Order to:

**David Robinett**  
**Enforcement Specialist**  
**VA DEQ –Valley Regional Office**  
**PO Box 3000**  
**Harrisonburg, VA 22801**  
**540-574-7862**  
**540-574-7878**  
**david.robinett@deq.virginia.com**